



DEPARTMENT OF THE NAVY
ENGINEERING FIELD ACTIVITY, WEST
NAVAL FACILITIES ENGINEERING COMMAND
900 COMMODORE DRIVE
SAN BRUNO, CALIFORNIA 94066-5006

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IN REPLY REFER TO:

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July 14, 1995

From: Commanding Officer, Engineering Field Activity West, Naval Facilities
Engineering Command

To: Distribution

Subj: REMEDIAL INVESTIGATION/FEASIBILITY STUDY, DATA TRANSMITTAL
MEMORANDUM, SITES 1, 2, 3, RUNWAY AREA, 6, 7A, 7B, 7C, 9, 10B, 11, 13,
15, 16 AND 19, NAVAL AIR STATION (NAS) ALAMEDA, CA

Encl: (1) Document Summary for Draft Data Transmittal Memorandum for Installation
Restoration Sites, 1, 2, 3, Runway Area, 6, 7A, 7B, 7C, 9, 10B, 11, 13, 15, 16
and 19, Naval Air Station Alameda, Alameda, CA
(2) Draft Data Transmittal Memorandum for Sites, 1, 2, 3, Runway Area, 6, 7A, 7B,
7C, 9, 10B, 11, 13, 15, 16 and 19, Naval Air Station Alameda, Alameda, CA

1. Enclosure (1) is the document summary for Enclosure (2) and is provided for your information. Enclosure (2) presents results of recent sampling conducted at Installation Restoration sites at NAS Alameda and is provided for your review and comment. The sampling is part of the basewide Remedial Investigation/Feasibility Study. This Data Transmittal Memorandum does not evaluate the nature and extent of contamination at these sites, but transmits data recently collected. Data evaluation will be conducted during preparation of the Remedial Investigation report. Please provide any written comments you have on this document to the Navy point of contact listed below within 60 days from the date of this letter.

2. If you have any questions regarding this matter, I can be reached at (415) 244-2549, FAX (415) 244-2654.

George K Kugawa
GEORGE KIKUGAWA
By direction

Distribution:

California Department of Toxic Substances Control (Attn: Tom Lanphar)
California Regional Water Quality Control Board (Attn: James Nusrala)
US Environmental Protection Agency (Attn: James Ricks)
Radiological Affairs Support Office (Attn: LCDR L. L. Fragoso)
California Department of Fish & Game (Attn: Michael Martin)

Subj: REMEDIAL INVESTIGATION/FEASIBILITY STUDY, DATA TRANSMITTAL
MEMORANDUM, SITES 1, 2, 3, RUNWAY AREA, 6, 7A, 7B, 7C, 9, 10B, 11, 13,
15, 16 AND 19, NAVAL AIR STATION (NAS) ALAMEDA, CA

US Fish & Wildlife Service (Attn: Steve Schwarzbach/Jim Haas)
US Department of the Interior (Attn: Gemma Timp)
US Army Corps of Engineers (Attn: Sharon Moreland)
National Oceanic & Atmospheric Administration (Attn: Denise Klimas)
Alameda County Health Department (Attn: Ravi Arulanantham)
Bay Area Air Quality Management District (Attn: Nancy Yee)
Bay Conservation and Development Commission (Attn: Steve McAdam)
San Francisco Bay National Wildlife Refuge (Attn: Elaine Harding-Smith)
PRC Environmental Management, Inc. (Attn: Duane Balch)
Montgomery Watson (Attn: Ken Leung)
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WRITER: G. Kikugawa/1831.2GK/X2549
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**DATA TRANSMITTAL MEMORANDUM
SITES 1, 2, 3, RUNWAY AREA, 6, 7A, 7B
7C, 9, 10B, 11, 13, 15, 16, 19
REMEDIAL INVESTIGATION/FEASIBILITY STUDY**

DOCUMENT SUMMARY

Document Type: Memorandum

Document Date: July 1995

Document Version: Draft

Summary: The data transmittal memorandum presents results of recent sampling conducted at 15 sites at Naval Air Station (NAS) Alameda: Sites 1, 2, 3, Runway Area, 6, 7A, 7B, 7C, 9, 10B, 11, 13, 15, 16, 19 and supplemental field work at Sites 4,5, and 10A.

The memorandum does not evaluate the nature and extent of contamination at these sites; that evaluation will be conducted during preparation of the remedial investigation report.

The memorandum summarizes data recently collected, and indicates if enough data are available to perform the remedial investigation risk assessment at these 15 sites.

The remedial investigation report, and the human health and ecological risk assessment it will contain, will describe the nature and extent of contamination at the sites that need to be cleaned up to be protective of human health and the environment. The feasibility study will identify the most appropriate cleanup method(s) for each site.

The field investigation reported in this data transmittal memorandum was conducted to supplement previous studies. The conclusions from the memorandum are summarized below.

- New groundwater monitoring wells were installed and the subsurface geology was investigated. Information collected in this activity helped to better define the subsurface geology. For example, the information indicates the distribution of soil types - like layers of impermeable clay or porous sand. This type of information is used to evaluate how contaminants are likely to move in the subsurface soils.

New groundwater monitoring wells and some existing wells were sampled. Also during this investigation, water levels were measured in the wells. Differences in water levels from well to well indicate the directions in which groundwater moves under the sites.

Shallow groundwater beneath NAS Alameda exists in two zones: the shallow (or first) water-bearing zone and the deeper (second) water-bearing zones. This investigation determined that in the first water-bearing zone the groundwater flow direction in the

eastern portion of the base (Sites 3, 6, 7A, 7C, 9, 10B, 13, 16, and 19) is influenced by utility trenches and exhibits no clear flow pattern. In the western portion of the base (Sites 1, 2, and the Runway Area) groundwater in the first water-bearing zone flows away from Runway Area toward the San Francisco Bay and Oakland Inner Harbor.

In the second water-bearing zone, in the eastern portion of the base, the groundwater flows westward toward the Seaplane Lagoon. In the second water-bearing zone in the western portion of the base, the groundwater flows away from the Runway Area toward the San Francisco Bay and Oakland Inner Harbor.

- During the investigation, soil and groundwater samples were collected to help assess the nature and extent of contamination. To evaluate the extent of potential contamination, samples are collected close to the location of a reported or suspected release. When results show levels of contamination are very low or not detected, it is assumed the extent of contamination has been adequately evaluated. The remedial investigation and feasibility study evaluation cannot occur until the extent has been assessed. The results of the investigation indicate the extent of contamination in soil and groundwater have been adequately characterized for this purpose at Sites 1, 2, Runway Area, 6, 9, 15, 16, and 19. Some uncertainty regarding the extent of contamination in groundwater still exists at Sites 3, 7A, 7B, 7C, 10B, 11, and 13. Uncertainties at Sites 3 and 7A include the extent of petroleum-related chemicals in the deeper water-bearing zone. If, based on the detected levels of contamination at these sites, a human or environmental risk exists, the need for additional sampling will be evaluated.



OAKLAND INNER HARBOR

SAN FRANCISCO BAY

RUNWAY AREA

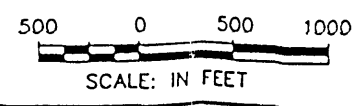
SAN FRANCISCO BAY

SEAPLANE LAGOON

LEGEND

- CTO 280 INSTALLATION RESTORATION SITE
- OTHER INSTALLATION RESTORATION SITE

| SITE NO | SITE DESCRIPTION |
|---------|---|
| 1 | 1943-1956 DISPOSAL SITE |
| 2 | WEST BEACH LANDFILL |
| 3 | AREA 97 (AVIATION GASOLINE TANKS) |
| 4 | BUILDING 360 (PLATING SHOP, ENGINE CLEANING SHOP, MACHINE SHOP, PAINT SHOP, AND PAINT STRIPPING SHOP) |
| 5 | BUILDING 5 (PLATING SHOP, PAINT STRIPPING SHOP, CLEANING SHOP, PAINT SHOP, SELECTIVE PLATING SHOP, FORMER HAZARDOUS WASTE STORAGE AREA, BATTERY STORAGE AREA AND WASTEWATER TREATMENT AREA) |
| 6 | BUILDING 41 (AIRCRAFT INTERMEDIATE MAINTENANCE DEPARTMENT) |
| 7 | BUILDINGS 459 (7A), 162 (7B) AND 547 (7C) (SERVICE STATIONS) |
| 8 | BUILDING 114 (PEST CONTROL AREA AND SEPARATOR PIT) |
| 9 | BUILDING 410 (PAINT STRIPPING) |
| 10 | BUILDINGS 400 (10A) AND 530 (10B) (MISSILE REWORK OPERATIONS) |
| 11 | BUILDING 14 (ENGINE TEST CELL) |
| 12 | BUILDING 10 (POWER PLANT) |
| 13 | OIL REFINERY |
| 14 | FIRE TRAINING AREA |
| 15 | BUILDINGS 301 AND 389 (STORAGE AREA) |
| 16 | CANS C-2 AREA |
| 17 | SEAPLANE LAGOON |
| 18 | SEWER SYSTEM (NOT ON THIS FIGURE) |
| 19 | YARD D-13 (HAZARDOUS WASTE STORAGE) |
| 20 | OAKLAND INNER HARBOR |



NAS ALMEDA
ALAMEDA, CALIFORNIA
INSTALLATION RESTORATION
SITES LOCATION MAP

FILE NAME: C:\ALAMEDA\JMS\OTM\VSITES.DWG
DATE: 04/23/95 BCM DN

ENCLOSURE 2

DRAFT
DATA TRANSMITTAL MEMORANDUM
DATED 11 JULY 1995 WAS CONVERTED TO:

FINAL
DATA TRANSMITTAL MEMORANDUM

DATED 14 JULY 1995

VOLUME 1 OF 2 IS FILED AS ADMINISTRATIVE
RECORD NO. **N00236.001214**

VOLUME 2 OF 2 IS FILED AS ADMINISTRATIVE
RECORD NO. **N00236.001215**